

AMENDMENTS TO THE CLAIMS:

This listing of claims replaces all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) A current compensation circuit comprising:

an impedance divider being directly coupled to a supply voltage source of a current mirror circuit and having an output node, the impedance divider being configured to generate a compensation signal at the output node representative of voltage changes in the supply voltage source; and

a ~~common-source~~ gain stage having a stage input coupled to the output node and a stage output connected to a node of the current mirror circuit, the gain stage being configured to generate a compensation current from the stage output for application to the node of the current mirror circuit in response to the compensation signal, the ~~common-source~~ gain stage being directly coupled to the supply voltage source and comprising a first parallel array of programmable transistors for defining a predetermined range of the compensation current.

Claim 2 (Cancelled)

3. (Currently Amended) The current compensation circuit of claim [[2]] 1 wherein the ~~common source gain stage comprises a~~ first parallel array of programmable transistors comprises p-channel transistors ~~for defining a predetermined range of the compensation current.~~

4. (Currently Amended) The current compensation circuit of claim 3 wherein the ~~common source~~ gain stage further comprises a second parallel array of programmable transistors to cooperate with the first parallel array of transistors for defining a predetermined gain characteristic for the compensation current.

5. (Previously Presented) The current compensation circuit of claim 1 wherein the impedance divider comprises at least two impedance elements coupled in series between the supply voltage source and a return voltage source.

6. (Currently Amended) A current compensation circuit comprising:
an impedance divider being directly coupled to a supply voltage source of a current mirror circuit and having an output node, the impedance divider operative to generate a compensation signal at the output node representative of voltage changes in the supply voltage source; and

a gain stage having an input coupled to the output node and a current output connected to a node of the current mirror circuit, the gain stage being directly coupled to the supply voltage

and operative to generate a compensation current for application to the node of the current mirror circuit in response to the compensation signal,

wherein the current compensation circuit is formed on a single complementary metal oxide semiconductor (CMOS) device comprising a first array of p-channel transistors and a second array of n-channel transistors.

7. (Previously Presented) The current compensation circuit of claim 1 wherein the current compensation circuit is formed on a complementary metal oxide semiconductor (CMOS) device.

8. (Currently Amended) The current compensation circuit of claim 7 wherein the first parallel array of programmable transistors ~~CMOS device~~ comprises a first array of p-channel transistors, ~~and a second array of n-channel transistors.~~

9. (Previously Presented) A current compensation circuit comprising:
a means for detecting changes in a supply voltage from a supply voltage source of a current mirror circuit, the means for detecting changes including a means for generating a compensation signal representative of changes in the supply voltage;

a means for generating a compensation current for application to the current mirror circuit in response to the compensation signal; and

a means for setting a range of available compensation current.

10. (Previously Presented) The current compensation circuit of claim 9 wherein the means for detecting changes in the supply voltage comprises an impedance divider coupled to the supply voltage source and having an output node, the impedance divider operative to generate a compensation signal at the output node representative of changes in the supply voltage.

11. (Currently Amended) The current compensation circuit of claim ~~[[9]]~~ 10 wherein the means for generating a compensation current comprises a ~~common-source~~ gain stage being directly coupled to the supply voltage source and having an input coupled to the output node and a current output connected to the current mirror circuit, the common-source gain stage operative to generate a compensation current for application to the current mirror circuit in response to the compensation signal.

Claim 12 (Cancelled)

13. (Currently Amended) The current compensation circuit of claim 11, ~~and~~ further comprising a means for setting a gain of the common-source gain stage.

Claims 14 to 19 (Cancelled)

20. (New) The current compensation circuit of claim 4 wherein the second parallel array of programmable transistors comprises n-channel transistors.

21. (New) The current compensation circuit of claim 6 wherein the gain stage comprises a first parallel array of programmable transistors.

22. (New) The current compensation circuit of claim 21 wherein the first parallel array of programmable transistors comprises the first array of p-channel transistors.

23. (New) The current compensation circuit of claim 22 wherein the gain stage further comprises a second parallel array of programmable transistors to cooperate with the first parallel array of transistors for defining a predetermined gain characteristic for the compensation current.

24. (New) The current compensation circuit of claim 23 wherein the second parallel array of programmable transistors comprises the second array of n-channel transistors.